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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MAR 2 3 2007

Ms. Mary Lou Capichioni
Director
Remediation Services
Corporate Environmental Services
The Sherwin-Williams Company
101 Prospect Avenue, N.W.
Cleveland, OH 44115-1075

Re: *Sherwin-Williams Gibbsboro Sites*
Vapor Intrusion Pathway Evaluation and Indoor Air Sampling Plan for the Paint Works Property, Gibbsboro, New Jersey (September 21, 2006)

Dear Ms. Capichioni:

The U.S. Environmental Protection Agency (EPA) has completed its review of the September 21, 2006 *Vapor Intrusion Pathway Evaluation and Indoor Air Sampling Plan for the Paint Works Property, Gibbsboro, New Jersey* (Vapor Intrusion Sampling Plan) submitted by the Sherwin-Williams Company (SWC) and offers the following comments. In addition, the New Jersey Department of Environmental Protection Agency (NJDEP) has provided comments on the September 21, 2006 document as well; these comments are enclosed (Attachment).

Comment Summary

The SWC Vapor Intrusion Sampling Plan (VISP) includes a summary of the previous groundwater, soil gas, and soil data (both confirmatory and screening) collected in 2003. Based on this data, SWC has presented a proposal for future vapor intrusion (VI) sampling. EPA, in an effort to simplify the presentation of comments, is categorizing the comments in the following sub-headings: General, Tables, Figures, Groundwater Data, Soil Data, Indoor Air Data, and Quality Control/Quality Assurance (QA/QC). Other comments, which would have been similar to those made by the NJDEP, are not included for duplicity sake; therefore, NJDEP's comments are enclosed in their entirety, separately.

General Comments

1. Residential and commercial structures are present in close proximity to the delineated area (i.e., extent of contamination depicted by SWC) in Figures 9 and 10. Based on the current "yellow line" in Figure 10 (approximate extent of benzene exceedances within groundwater), EPA is requesting that additional homes/businesses be added to the study on U.S. Avenue and Berlin Road. That would include: 10, 14, 19, and 25 U.S. Avenue, 41 Berlin Road (and at least one house east of it), 7 and 10 Foster Avenue.

Additional rationale for the selection of several of these residential structures is present in the fact that the following groundwater monitoring wells (located within the U.S. Avenue Burn Site) exhibited benzene exceedances during the 2005 sampling program (located just down-gradient from 25 U.S. Avenue): MW-7, MW-9, BSMW0002, and BSMW0003. Finally, based upon the results of this phase of sub-slab sampling, EPA may require additional sub-slab sampling.

2. Page 1 of the Work Plan cites specific (tax parcel) Block's and Lot's, please submit a map of the referenced information.

3. There are several references within the Work Plan (pages 2 and 4) to the fact that remedial actions have been performed to address historical discharges. It should be noted that remedial actions performed by a potentially responsible party (PRP) for EPA would require that it be under a Consent Decree or a Unilateral Administrative Order. Please clarify the authority, under which these response actions were performed.

4. Section 4.1, page 12 - There is a reference to Section VII. Since there is no Section VII, please cite the correct text, figure, or table.

Comments on the Tables

1. Table 1 - Monitoring Well Depth to Groundwater Observations

   a. According to Table 1, MW-1, MW-11, MW-22, and MW-24 were the only wells to have been recorded as exhibiting product or a sheen during the 2003 sampling program; however, there is no data presented for any of these wells in the subsequent tables, figures, and/or text. Please justify the rationale for why these wells were not sampled and the data not presented, and if samples were collected please present the data.

   b. MW-22 (which is 33 ft. deep and depth to water - 6.05 ft.) is reported to have a sheen, yet MW-21 (which is 14 ft. deep and depth to water - 5.58 ft.) does not. The wells are located directly adjacent to one another. Please provide an explanation as to how a deeper well can exhibit a sheen when the shallow well in the cluster does not. Especially in light of your characterization of the plume as petroleum or mineral spirits, both of which are Light Non-aqueous Phase Liquids (LNAPLs).

2. The text states that several constituents were detected in the indoor air during the sampling event that was conducted in Building 50 and 67. The results of the indoor air samples collected are presented in Table 4. The table being referred to in the text does not include method detection limits. Please submit a revised table to the reviewed which includes method detection limits and compare the data to the Region 3's RBCs.

3. Table 6 should be revised to include all constituents on the (analytical method) TO-15 analyte list and the correct screening criteria (Region 3 RBCs) should be included.

Comments on Figures

1. Previous comments made by the EPA hydrogeologist during meetings have not been incorporated during the contouring of the potentiometric maps (i.e., Figures 4 and 5). As a general rule of science, the groundwater elevation is defined by the topography at surface water bodies (including seeps). For example, if the lake maintains an elevation of 91 feet above mean sea level (amsl), then the 91-foot potentiometric line runs around the shoreline. Currently the figures depict that the 90, 91, and 92 -foot contours all intersect Silver Lake. Another example of this is in the area of White Sands Branch. Currently the shallow, unconfined water table is shown as being contoured above the surface topography over this entire area. Finally, closer review of several figures indicate that (within the areas in to the south of the site) groundwater contours are above the surface elevations (i.e., Figure 4) - which is not scientifically possible. Please re-contour these maps and incorporate both monitoring well and surface water potentiometric information. This is of importance since this information is used to predict flow directions, future monitoring well locations, and VI potential.

   In addition, it is common practice to post the values upon which a contour map is based. In the case of Figures 4 and 5, there were data points that were not honored in the contorting. Elimination of these points has considerable impact upon assumed groundwater flow directions, future monitoring well locations, and VI potential.

2. Figure 4, Shallow Groundwater

   a. Data at MW-21 was not incorporated during the contouring process.

   b. Many groundwater contours are at higher elevations than the surface topography. This may be primarily due to the fact that the author did not consider surface water elevations to be equivalent to groundwater elevations.

   c. Contour values are not posted.

   d. Both shallow and deep wells are posted in the same way, making it difficult to discern which is being used to create the contours.

   e. Silver Lake, which is at an elevation of approximately 91 feet amsl, has three different contours intersecting it: the 90, 91, and 92 foot contours. Please see Comment #1 (in this section) above.

f. MW-1 and MW-22, both shallow wells, are not posted on this figure.

3. Figure 5, Deep Groundwater

a. Data at MW-37 was not incorporated during the contouring process. This creates a substantially changed flow pattern.

b. An explanation as to why there is no data presented for MW-42 should be presented. This is the farthest west deep well and is an important control point for understanding the deep groundwater flow.

c. Contour values are not posted.

d. Both shallow and deep wells are posted in the same way, so that it is difficult to interpret which is being used to create the contours.

4. Figure 9 - Groundwater Analytical Results Exceedances Only - Shallow Wells

a. Please justify the rationale for leaving MW-1 out of the "free product" area when it exhibited 1.64 feet of product thickness in the last sampling.

b. Please present the technical principles used to create the "oval areas" depicted in this figure. One area is elongated in the direction of groundwater flow (although MW-1 was left out). The other area is elongated in a direction away from the houses, but in a direction contrary to groundwater flow.

c. The color-code designations for benzene and PCP exceedances in shallow groundwater in Figure 9 appear to be incorrect at a number of locations. The designations noted within the map "key" for benzene and PCP most probably should be switched.

5. Figure 10 - Approximate Extent of Benzene Exceedances - Shallow Wells

a. EPA does not agree with the data interpretation regarding the approximate extent of benzene exceedances. Most anaylses did not achieve an acceptable detection limit to precisely define the potential extent. Review of the data presented in Table 2 indicates that the detection limit for benzene is frequently reported as 10 parts per billion (ppb) or 50 ppb, well over the action level of 1 ppb for benzene. Further inspection of data available on the Weston TeamLink Web-site indicates that there are many benzene-related TICs with high concentrations, present at the site.

A closer inspection of the data available on the TeamLink Web site for WP-13 raises other questions, discussed here rather than in other comment subsections. Two results are provided for pentachlrophenol, both collected on the same date, therefore, indicating that it was the same sample. One result is for 0.098 ppb (as is the detection limit and is the sample presented within Table 2), while the other sample had a detection limit of 250 ppb, yet this result is not provided in the VISP. Although this was one random sample selected by EPA for review of comparison TeamLink data, this raises serious concerns for potential error (and raises the scrutiny of all other data) for the remaining groundwater data. An explanation of this discrepancy must be provided.

b. It was also noted, after review of the data available on TeamLink, that there were samples (labeled as monitoring well samples) collected in 2002; however, not always for full TCL. One such sample result was for MW-13R which was collected on 4/10/2002 and analyzed for degraded mineral spirits. The result was 1,000,000 mg/kg (presumably a soil sample); however, a discussion of these prior results should have been discussed in the VISP.

6. Section 2.2, page 8 appears to incorrectly reference Figure 9 with respect to the results of the confirmatory soil sampling program. The reference should be to Figure 8.

7. Section 3.1 appears to incorrectly reference Figure 10 with respect to the presence of residual/free product. The reference should be to Figure 9. Figure 10 relates to the areal extent of benzene groundwater exceedances.

8. Section 3.2 references Figure 11; however, there was no such figure submitted. Please include Figure 11, which depicts the sampling locations. In addition, it appears that the last paragraph on page 11 incorrectly references Figure 11, when it should be Figure 10.

Groundwater Data Comments

1. All future submittals summarizing groundwater sampling work should include a table for monitoring well information. This would include information; such as, well depths, screened intervals, surface elevation, etc. This is important information for interpreting these results, and it should be readily available.

2. It is stated that SWC will utilize EPA Region 9 risk-based concentrations (RBCs) in order to assess the 2003 groundwater data for its potential for vapor intrusion. Using these values, the groundwater concentration for benzene is 1.0 ppb. Reviewing the 2003 groundwater data within Table 2 it is apparent that the detection limits for benzene were too high (i.e., 10 ppb and at times 50 ppb), therefore making it difficult to assess the proposed VI sampling locations presented by SWC (discussed later). In the future, all rounds of groundwater sampling must have low detection limits, through the use of a

low-concentration analytical method. In addition, the VOC compound list should include: 1, 4 dioxane, bromochloromethane, and 1,2, 3 Trichlorobenzene.

3. Section 4.2, page 16 - EPA agrees that there should be a monitoring well installed in this general location, because there are pentachlorophenol (PCP) detections in wells directly downgradient (deeper groundwater).

Soil Data Comments

1. There are numerous statements within the VISP text or references to the associated figures, which state or imply that the extent of product-impacted soil has been delineated. To summarize, the soil screening and sampling program employed by SWC consisted of 162 soil screening locations, of those, 19 soil sampling borings were installed. The confirmatory soil sampling program was biased towards those screening locations which showed obvious signs of contamination; however, 7 out of the 19 locations were "clean" according to Figure 7 (which would have an impact on the statement made on Page 10, "benzene was found in only three of eighteen locations"). In addition, the text states that the actual soil sample "intervals" would be collected at the soil/water interface; however, when comparing the depth-to-water readings from monitoring wells within the adjacent areas (utilizing the provided figures and Table 1), this was not always the case. According to Table 3A, some core sections (intervals) were not analyzed at all, while others had unusually high detection limits for results (i.e., 28 mg/kg, 30, 32, 59, 61, 64, 82, 150 mg/kg).

   Combined, all of these facts add up to inconsistencies within the confirmatory soil sampling program, not to mention that there is no additional information provided as to which (soil) intervals were screened (and what screening method was utilized) prior to the selection of confirmatory soil sampling intervals. Finally, it is apparent after reviewing Figure 7 that the extent of residual product within soil is not delineated. This is true for the following areas: 1) the area north of sample FPBKG (which according to Table 3A, was not analyzed at all, other than for TOC), but according to screening results - there were many hits; 2) all areas to the east (running north and south) along U.S. Avenue; and 3) again, without information as to the intervals screened (that were clean) it is difficult to interpret whether the screening program adequately delineated the extent of residual soil contamination.

2. Within Section 3.1 it is stated that the free product is a "weathered mineral spirit", as well as the fact that Figure 8 presents the results for many Tentatively Identified Compounds (TICs). EPA is requesting that the chromatograms for these results be submitted for review.

Indoor Air Data Comments

1. Section 2.0, page 5 - The statement that indoor air sampling results were inconclusive regarding the sources of the constituents should be clarified. This statement contradicts all later text which states that the extent of residual product in soil (which would imply the high concentrations of TICs) and contamination in groundwater (both shallow and deep) have been defined.

2. It is stated within the text that the indoor air concentrations of the constituents detected were compared to Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Please note, EPA does not consider OSHA PELs as a screening tool. All detected constituents in the indoor air should be compared to their respective Region 3 PRGs, with the exception of TCE and PCE. The screening criteria for TCE and PCE in indoor air are: 1 ug/m^3 and 0.05 ug/mg^3. Secondly, based on the review of the data available in this report, it was determined that the following constituents exceeded their respective Region 3 PRG's in Buildings 67 and 50: methylene chloride, benzene, and xylene.

3. On page 11, it is stated that chlorinated solvents "have not been considered site-related" COPCs. EPA does not agree with this position. Based on the 2003 groundwater sampling data, monitoring wells: 12, 14, 15, and 21, which appear to be located within the confines of the former facility, all indicate the presence of chlorinated organic compounds. A line of monitoring wells that appear to be upgradient of the former facility (MW-SCAR, MW-25, MW-27, MW-28, MW-29, and WP-13) do not contain any indication of chlorinated organic compounds at the time of sampling. In addition, methylene chloride, which is associated with paints and paint manufacturing, has been found in the indoor air and historically in the groundwater. Please include methylene chloride in all future sampling matrices and Table 6.

   Furthermore, it is stated that chlorinated compounds are not a concern in the soil, based in part, on their absence from any soil samples collected across the site (including the confirmatory soil sampling program). After review of Table 3a, which presents soil concentrations as mg/kg, the detection limits in many of the samples are very high (see Soil Data Comment #1, above). This is presumably due to the high levels of BTEX-related compounds and TICs raising the detection limit. This, in effect, could be masking the presence of the chlorinated compounds at levels which would be a concern for the VI study. Based on the 2003 sampling data, vinyl chloride and 1,2-DCA, both breakdown products for other chlorinated organic compounds, are present in a few monitoring wells at the Site, but not in up gradient wells.

4. Section 4.1, page 13 - It is stated that "The levels of VOCs will be screened against levels of concern....the values are EPA Region 9 PRGs." For screening purposes, the maximum

detected concentration of constituents detected in the subslab should be compared to EPA Region 3 RBCs for ambient air, which should be adjusted by a factor of 10 (attenuation factor), with the exception of TCE and PCE. Please see Indoor Air Comment #2 above.

5. Section 4.1.1, page 14 - It is stated that, "In addition to sampling the sub-slab air, at least 9 samples will be collected from outdoor air to establish ambient outdoor air concentrations of the VOCs." Please note, EPA will not use any data (at this point) collected outside the homes/buildings that are not from samples collected either sub-slab or indoor air. Also, it should be noted that in the future, it may be determined that in addition to sub-slab samples within the homes, that indoor air samples may need to be collected as well.

Quality Assurance/Quality Control (QA/QC) Comments

The Work Plan did not provide any specific information on QA/QC requirements for the project. Information such as total number of samples along with any QC samples, the laboratory requirements, sampling procedures, data verification, validation process, and data acceptance requirements were not included. In addition, it was not clearly indicated if a Quality Assurance Project Plan (QAPP) will be submitted at a later date for this purpose. It should be noted that EPA Region 2 has implemented the Uniform Federal Policy for QAPPs (UFP-QAPP) for documenting the assessment, evaluation, and usage of the data generation component of a project. The implementation of the UFP-QAPP ensures that documentation of the required QA/QC activities for environmental data generation are satisfied and should be used. The UFP-QAPP policy and associated guidance documents can be found at the following Web-site: http://www.epa.gov/swerffrr/documents/qualityassurance.htm and are consistent with EPA Requirements for Quality Assurance Project Plans (QA/R-5, EPA 240-B-01-003).

EPA is requesting that the SWC submit a revised VISP within 21 days of receipt of EPA's comments. If you have any questions regarding this letter, please contact Ray Klimcsak, of my staff, at (212) 637- 3916.

Sincerely yours,

Carole Petersen, Chief
New Jersey Remediation Branch

Enclosure

cc: John Doyon, NJDEP w/o encl.